

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ling JONG et al.

Divisional of Serial No.: 10/224,979

Group Art Unit: Unassigned

Filing Date: Concurrently herewith

Examiner: Unassigned

Title: ANALOGS OF INDOLE-3-CARBINOL METABOLITES AS CHEMOTHERAPEUTIC AND CHEMOPREVENTIVE AGENTS

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is an Information Disclosure Statement submitted for the Examiner's consideration.

Applicants respectfully request that the Examiner review and make of record the references identified below.

The references identified below were disclosed and/or cited in parent application Serial No. 10/224,979, filed August 20, 2002, and, as such, copies thereof are not included pursuant to the provisions of 37 CFR § 1.98(d).

A PTO-1449 form listing the references accompanies this paper. Applicants respectfully request that the Examiner initial and return a copy of the form to indicate that the references have been reviewed and made of record. The references are as follows:

U.S. PATENT DOCUMENTS		
Document No.	Issue Date / Publication Date	Patentee / Applicant
3,527,517	8/9/70	Hackmann
4,636,820	1/13/87	Schmidt et al.
5,086,171	2/4/92	Mathiapanam
5,116,978	5/26/92	Mathiapanam
5,266,699	11/30/93	Naef et al.
5,326,879	7/5/94	Takahashi et al.
5,380,723	1/10/95	Takahashi et al.
5,843,607	12/1/98	Hu et al.
5,942,340	8/24/99	Hu et al.
5,948,808	9/7/99	Safe
6,323,233	11/27/01	Wright et al.
6,407,102	6/18/02	Mahboobi et al.

FOREIGN PATENT DOCUMENTS		
Document No.	Publication Date	Country
EP 0908787 A2	4/14/99	Europe
WO 99/57117	11/11/99	PCT
WO 02/36561	5/10/02	PCT
WO 02/36597	5/10/02	PCT
GB 2207670 A	2/8/89	United Kingdom

OTHER DOCUMENTS		
BISWAS et al. (1998), "A Convenient Synthesis of 5,11-Dihydro-5,11-dimethyl-6-trifluoromethylindolo[3,2-b]carbazole," <i>Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry</i> 37B(9):841-843.		
BLACK et al. (1995), "Synthesis of Indolo[3,2-b]carbazoles from 4,6-Dimethoxyindole and Aryl Aldehydes," <i>Tetrahedron</i> 51(43):11801-11808.		
BONNESEN et al. (2001), "Dietary Indoles and Isothiocyanates That Are Generated from Cruciferous Vegetables Can Both Stimulate Apoptosis and Confer Protection Against DNA Damage in Human Colon Cell Lines," <i>Cancer Research</i> 61:6120-6130.		
BRADLOW et al. (1991), "Effects of Dietary Indole-3-carbinol on Estradiol Metabolism and Spontaneous Mammary Tumors in Mice," <i>Carcinogenesis</i> 12(9):1571-1574.		
CHINNI et al. (2001), "Indole-3-carbinol (13C) Induced Cell Growth Inhibition, G1 Cell Cycle Arrest and Apoptosis in Prostate Cancer Cells," <i>Oncogene</i> 20:2927-2936.		
GROTTA et al. (1961), "Preparation of Some Condensed Ring Carbazole Derivatives," <i>J. Org. Chem.</i> 26:1509-1511.		
KISTENMACHER et al. (1992), "A Direct Synthesis of Indolocarbazoles via New Dinitroterphenyl Precursors," <i>J. Heterocyclic Chem.</i> 29:1237-1239.		
KNÖLKER et al. (1998), "Iron-Mediated Synthesis of Indolo[2,3-b]carbazole," <i>Tetrahedron Letters</i> 39:4007-4008.		
KNÖLKER et al. (2000), "Transition Metal Complexes in Organic Synthesis. Part 61: Convergent Synthesis of Indolo[2,3-b]carbazole by an Iron-Mediated Bidirectional Annulation of Two Indole Rings," <i>Tetrahedron</i> 56:4733-4737.		
KOJIMA et al. (1994), "Chemoprevention of Spontaneous Endometrial Cancer in Female Donryu Rats by Dietary Indole-3-carbinol," <i>Cancer Research</i> 54:1446-1449.		
LIU et al. (1994), "Indolo[3,2-b]carbazole: A Dietary-Derived Factor That Exhibits Both Antiestrogenic and Estrogenic Activity," <i>Journal of the National Cancer Institute</i> 86(23):1758-1765.		
MICHNOVICZ et al. (1997), "Changes in Levels of Urinary Estrogen Metabolites After Oral Indole-3-carbinol Treatment in Humans," <i>Journal of the National Cancer Institute</i> 89(10):718-723.		
SWINDELLS et al. (1956), "Preparation of Indolocarbazoles. VIII. Preparation of 1-Methylindolo[2',3'-2,3]carbazole," <i>J. Chem. Soc.</i> , pp. 1135-1138.		

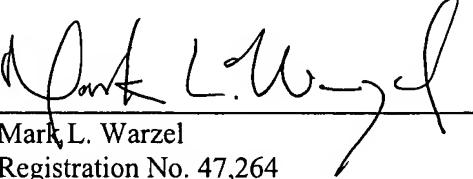
As the subject application was filed after June 30, 2003, copies of the U.S. patents and/or publications disclosed in this Information Disclosure Statement are not required and, therefore, are not included.

This Information Disclosure Statement is not intended as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any of the above references constitutes prior art to the present application within the meaning of 35 USC § 102.

As this Information Disclosure Statement is being filed concurrently with the application, no fee is required.

Respectfully submitted,

By:

  
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
(use as many sheets as necessary)

Sheet	1	of	2	Attorney Docket Number	8500-0264.10
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**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	Document No.	Issue Date or Publication Date	Name of Patentee or Applicant of Cited Document	Class	Subclass	Filing Date if Appropriate
	AA	3,527,517	8/9/70	Hackmann			
	AB	4,636,820	1/13/87	Schmidt et al.			
	AC	5,086,171	2/4/92	Mathiaparanam			
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	AO	WO 02/36561	5/10/02	PCT			
	AP	WO 02/36597	5/10/02	PCT			
	AQ	GB 2207670 A	2/8/89	United Kingdom			

**OTHER DOCUMENTS — NONPATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), Title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	AR	BISWAS et al. (1998), "A Convenient Synthesis of 5,11-Dihydro-5,11-dimethyl-6-trifluoromethylindolo[3,2-b]carbazole," <i>Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry</i> 37B(9):841-843.	
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	AU	BRADLOW et al. (1991), "Effects of Dietary Indole-3-carbinol on Estradiol Metabolism and Spontaneous Mammary Tumors in Mice," <i>Carcinogenesis</i> 12(9):1571-1574.	
	AV	CHINNI et al. (2001), "Indole-3-carbinol (I3C) Induced Cell Growth Inhibition, G1 Cell Cycle Arrest and Apoptosis in Prostate Cancer Cells," <i>Oncogene</i> 20:2927-2936.	
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	AY	KNÖLKER et al. (1998), "Iron-Mediated Synthesis of Indolo[2,3-b]carbazole," <i>Tetrahedron Letters</i> 39:4007-4008.	

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	AZ	KNÖLKER et al. (2000), "Transition Metal Complexes in Organic Synthesis. Part 61: Convergent Synthesis of Indolo[2,3- <i>b</i> ]carbazole by an Iron-Mediated Bidirectional Annulation of Two Indole Rings," <i>Tetrahedron</i> <u>56</u> :4733-4737.	
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	BB	LIU et al. (1994), "Indolo[3,2- <i>b</i> ]carbazole: A Dietary-Derived Factor That Exhibits Both Antiestrogenic and Estrogenic Activity," <i>Journal of the National Cancer Institute</i> <u>86</u> (23):1758-1765.	
	BC	MICHNOVICZ et al. (1997), "Changes in Levels of Urinary Estrogen Metabolites After Oral Indole-3-carbinol Treatment in Humans," <i>Journal of the National Cancer Institute</i> <u>89</u> (10):718-723.	
	BD	SWINDELLS et al. (1956), "Preparation of Indolocarbazoles. VIII. Preparation of 1-Methylindolo[2',3'-2,3]carbazole," <i>J. Chem. Soc.</i> , pp. 1135-1138.	

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